

## LAMPIRAN

*Lampiran 1. Table 3.2. Pemilahan sampah di Perkotaan.*

Tahun	Sampah per kapita (kg/hari)	Total Sampah (ton/hari)	Komposisi		Dapat dikompos (%)	Dapat didaur ulang (%)	Total Sampah Setelah Daur ulang dan Pengomposan
			Organik	Anorganik			
1995	0,80	52,360	80	20	1,5	7	47,190
2000	1,00	78,290	74	26	10	15	58,720
2003	1,10	93,290	70	30	19	18	58,770
2005	1,20	107,340	68	32	25	20	59,040
2008	1,70	164,710	64	36	26	23	84,000
2010	1,80	184,400	62	38	27	25	88,520
2020	2,10	267,130	50	50	30	25	114,870

Catatan : 1. Pertambahan timbulan sampah per kapita di Jakarta dan Surabaya adalah masing-masing 6 dan 5 %. Perkiraan pertambahan secara menyeluruh di daerah perkotaan, maka digunakan angka yang lebih kecil yaitu sebesar 4 % (Serageldine, 1995).

2. Persentase sampah yang dapat didaur ulang dan dikompos disini adalah konservatif untuk mewakili situasi daerah perkotaan secara keseluruhan. Potensi daur ulang dan pengomposan di kota-kota tertentu dapat jauh lebih

*Lampiran 2. Table 1-1. Waste management and 3R-related policies/strategies in Asia and the Pacific.*

<b>Country</b>	<b>Reference on waste management in its basic environmental policy</b>	<b>Waste management law</b>	<b>Framework strategy and law on resource circulation and the 3Rs</b>	<b>Law for recycling and take-back scheme for specific end-of-life products</b>
Bangladesh	National Environment Policy 1992	- -	National 3R Strategy 2010	--
Cambodia	Law on Environmental Protection and Natural Resources Management 1996	Sub-decree on SWM (1999)	--	--
China	Environmental Protection Law of the People's Republic of China (2014 Revision)	Law of the People's Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes (2015 Amendment)	Circular Economy Promotion Law of the People's Republic of China (2008)	Regulation on the Administration of the Recovery and Disposal of Waste Electrical and Electronic Products (2009, Order of the State Council of the People's Republic of China (No. 551))

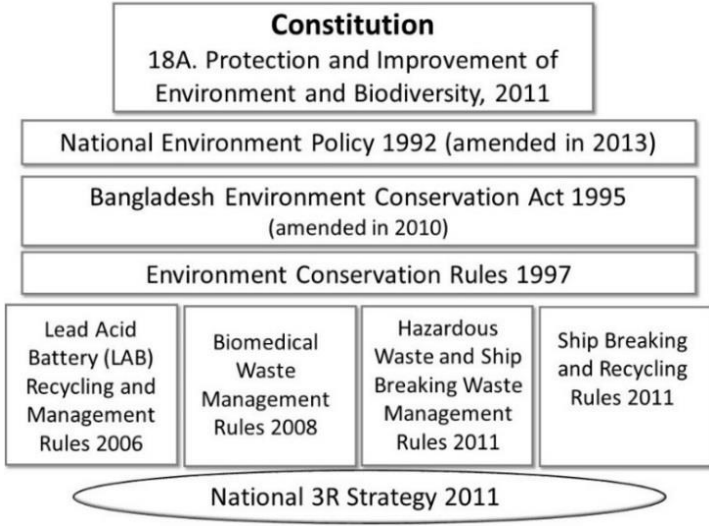
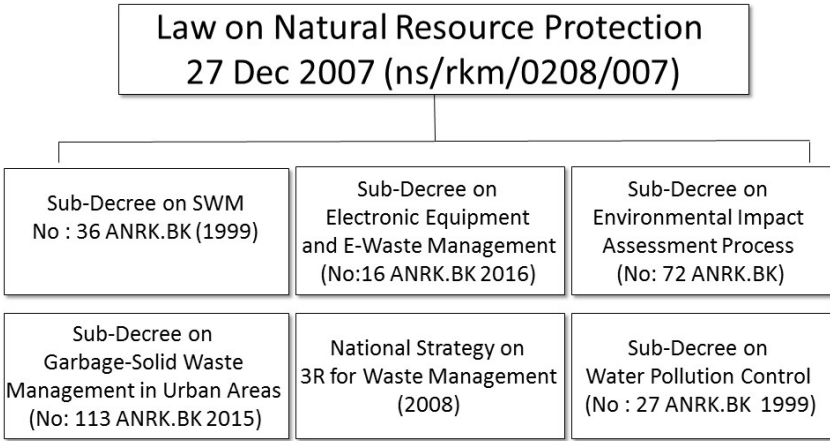
Country	Reference on waste management in its basic environmental policy	Waste management law	Framework strategy and law on resource circulation and the 3Rs	Law for recycling and take-back scheme for specific end-of-life products
India	<ul style="list-style-type: none"> <li>- Article 48A, directive principle, Part IV and Article 51 A(g), Part IVA, of the amendment of Constitution of India in 1976;</li> <li>- Environmental Protection Act 1986;</li> <li>- Factories Act 1948 and its amendment in 1987</li> <li>- National Environment Policy (2006)</li> </ul>	<ul style="list-style-type: none"> <li>- Solid Waste Management Rules, 2016;</li> <li>- Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016;</li> <li>- Bio-Medical Waste Management Rules, 2016;</li> <li>- Construction and Demolition Waste Management Rules, 2016</li> <li>- Plastic Waste Management Rules, 2016</li> </ul>	Waste Management Rules are based on 5Rs strategies that include resource circulation and the 3Rs principles.	E-waste (Management) Rules, 2016
Indonesia	Environmental Protection and Management Act No. 32 (EPMA 32/2009)	Law no.18/2008 on MSW Management: 3R as the principle approach for waste management Law no, 32/2009 on Haz. Wastes	The government regulation no. 81/2012 on 3Rs and EPR President Regulation No.97/2017 on Policy and National Strategy of MSW	--

Japan	Basic Environmental Law and Plan	Waste Management and Public Cleansing Law	Basic act and fundamental plan for establishing sound material cycle society	Various recycling laws such as: Container Packaging Resource Recycling Act (1995) and Home Appliance Recycling Act (1998)
Malaysia	Environmental Quality Act 1974	Solid Waste and Public Cleansing Management Act 2007	There are 8 Regulations on 3R within the Solid waste Act	There are 8 Regulations within the Solid waste Act
The Philippines	PD 1152 – Philippine Environment Code (1977) RA 8749 – Philippine Clean Air Act of 1999 RA 9275 – Philippine Clean Water Act of 2004 (2004)	Ecological Solid Waste Management Act of 2000 (RA 9003)	Ecological Solid Waste Management Act of 2000 (RA 9003)	--

<b>Country</b>	<b>Reference on waste management in its basic environmental policy</b>	<b>Waste management law</b>	<b>Framework strategy and law on resource circulation and the 3Rs</b>	<b>Law for recycling and take-back scheme for specific end-of-life products</b>
Singapore	Environmental Public Health Act	Environmental Public Health (General Waste Collection) Regulations; Environmental Public Health (Toxic Industrial Waste) Regulations	Sustainable Singapore Blueprint setting waste recycling rate target of 70% in 2030 with a goal of becoming a Zero Waste Nation	--
Thailand	Enhancement and Conservation of National Environmental Quality Act B.E. 2535 (1992), Factory Act B.E. 2535 (1992), Public Health Act B.E.2535 (1992)	Maintenance of Public Sanitary and Order Act. B.E. 2535 (1992) and B.E.2560 (2017)	National Solid Waste Management Master Plan, Action Plan “Thailand Zero Waste, 2016”	Regulation on National Waste Management System 2007, Draft WEEE Act., Draft Waste Management Act, Draft Promotion of 3Rs and Utilization of Waste

Viet Nam	Law on Environmental Protection 2014 (amended in 2014)	Decree 38/2015/ND-CP on management of wastes and scrap	National Strategy on Integrated Solid Waste Management to 2025, vision to 2050 (Being revised)	Regulation for take- back and treatment of discarded products: Prime Minister Decision 16/2015/QĐ-TTg dated 22 May 2015 (Small appliances, home appliances, lubricant oils, used tyres, ELVs)
Pacific Island Countries	<p>The Pacific Regional Waste and Pollution Management Strategy 2016-2025 (Cleaner Pacific 2025) is a comprehensive long-term strategy for integrated sustainable waste management and pollution prevention and control in the Pacific Region. Cleaner Pacific 2025 integrates strategic actions addressing priority waste and pollution issues in the region. Countries within the region are responsible for developing and enforcing specific laws and regulations concerning waste management guided by multi-environmental agreements. Cleaner Pacific 2025 presents the current status of waste, chemicals and pollution policies in the Pacific Island countries and territories. SPREP and J-PRISM are working collaboratively in the development and updating of country waste policies.</p>			

*Lampiran 3. Table 1-2. Legislative/institutional framework of waste management and 3R policies and strategies*

Country	Legislative Framework
<b>Bangladesh</b>	 <p style="text-align: center;"><i>Source: Prepared by Ghosh S.K., Author of Country Chapter</i></p>
<b>Cambodia</b>	 <p style="text-align: center;"><i>Source: Prepared by Ghosh S.K., Author of Country Chapter</i></p>

*Source: prepared by IGES based on the data and information of Country Chapters (United Nations Centre for Regional Development, 2017),*

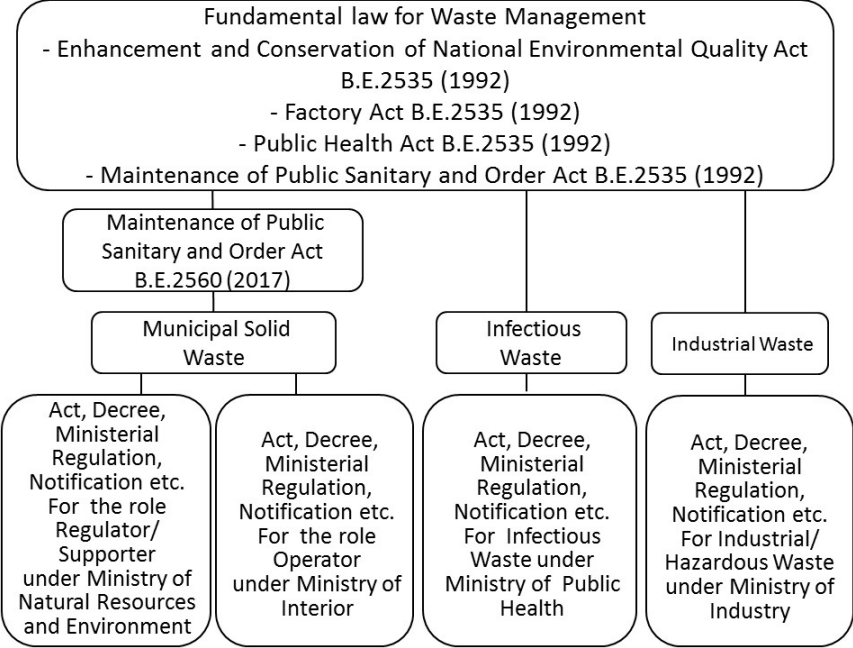
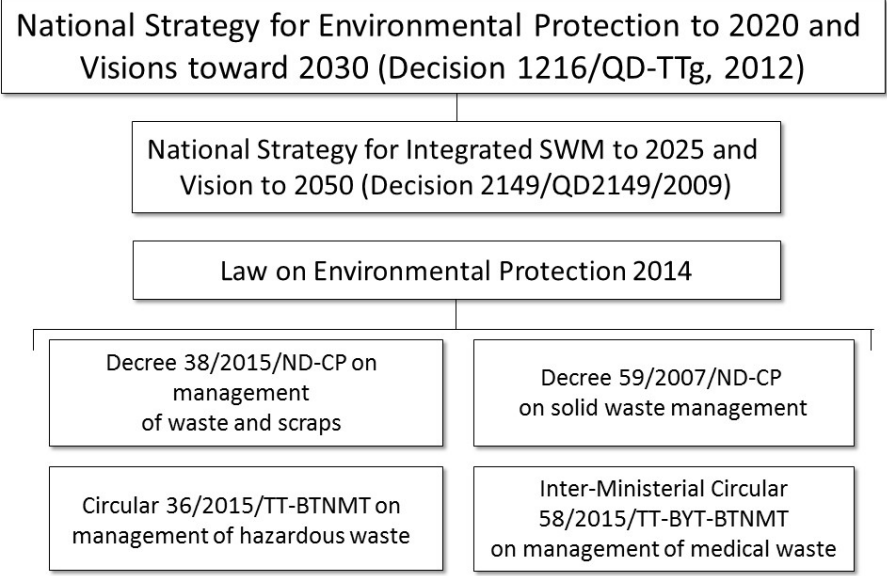
*State of the 3Rs in Asia and the Pacific*

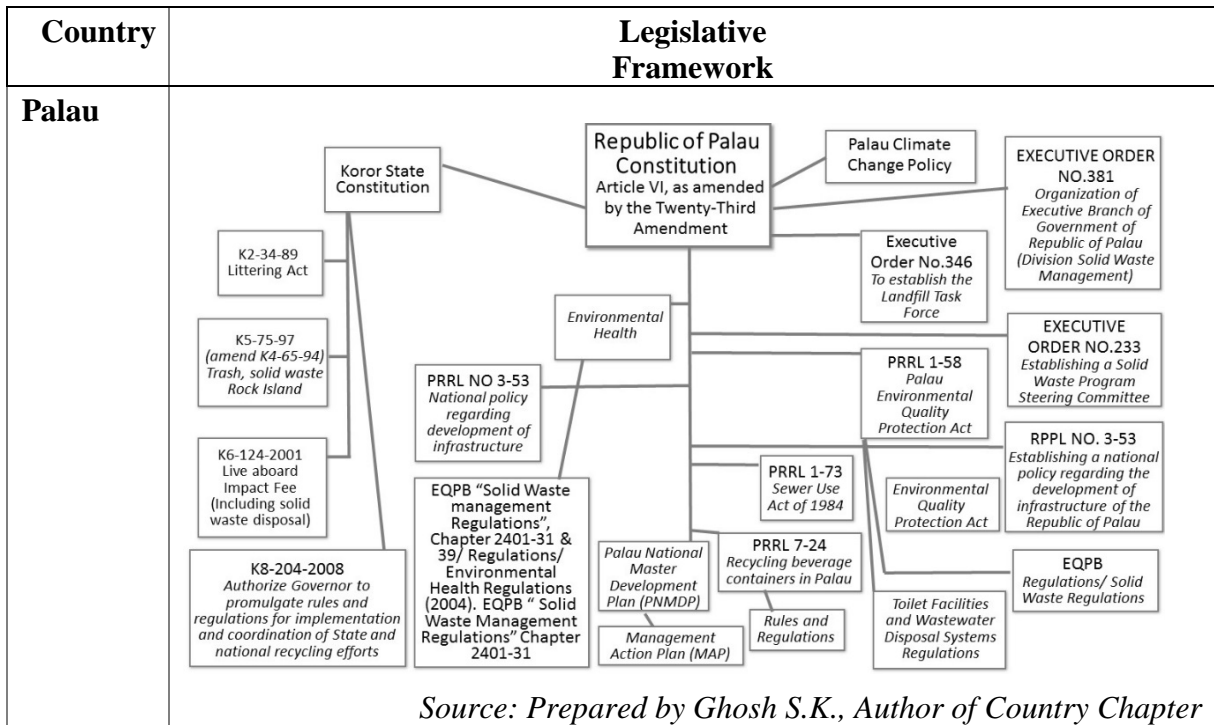
Country	Legislative Framework
China	<p style="text-align: center;"><i>Source: Prepared by Ghosh S.K., Author of Country Chapter</i></p>
India	<p style="text-align: center;"><i>Source: Prepared by Ghosh S.K., Author of Country Chapter</i></p>



Country	Legislative Framework																		
Indonesia	<div style="display: flex; justify-content: space-around;"> <div style="width: 45%;"> <p style="text-align: center;"><b>For HW management</b></p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Act No. 32/2009 Environmental Protection and Management</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Government Regulation No 101/2014 Management of HW</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px;">Ministry of Environment Regulation No. 02/2008 HW Valorization</div> </div> <div style="width: 45%;"> <p style="text-align: center;"><b>For MSW management</b></p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Act No.18/2008 Municipal Solid Waste Management</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Government Regulation No. 81/2012 Management of Solid Household and Household-like Waste</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px;">Ministry of Environment and Forestry Regulation No. 13/2012 Guidance of 3Rs Implementation through Waste Bank</div> </div> </div> <div style="margin-top: 20px;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px; width: fit-content; margin-left: auto; margin-right: auto;">(Draft) Government Regulation Acceleration of Management of Household and Household-like Waste towards Clean Indonesia in 2020</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-left: auto; margin-right: auto;">(Draft) President Decree Policy and Strategy of Solid Household and Household-like Waste</div> </div> <p style="text-align: right; margin-top: 20px;"><i>Source: National working work on MSW management, Ministry of Environment and Forestry Palembang, March 15-17, 2017</i></p>																		
Japan	<div style="text-align: center; margin-bottom: 10px;"> <div style="border: 1px solid black; padding: 5px; display: inline-block;">Basic Environmental Act Enacted November 1993</div> <div style="margin-left: 20px;"> <b>Basic Environment Plan</b> Enacted December 1994 Revised June 2013.         </div> </div> <div style="margin-bottom: 10px;"> <div style="border: 1px solid black; padding: 5px; display: inline-block; width: 60%;">The Basic Act for Establishing a Sound Material-Cycle Society (Basic Framework Act) Enacted May 2000</div> <div style="margin-left: 10px; font-size: small;">           (To ensure material cycle society, control consumption of natural resources, and reduce environmental load.)         </div> </div> <div style="margin-bottom: 10px;"> <div style="border: 1px solid black; padding: 5px; display: inline-block; width: 80%;"> <b>The Fundamental Plan for Establishing a Sound Material-Cycle Society:</b> Established March 2003  <b>The fundamentals for other plants designed by the State</b> Revised May 2013         </div> </div> <div style="display: flex; justify-content: space-between; font-size: small;"> <div style="width: 45%;"> <p>&lt;Appropriate waste treatment&gt;</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Waste Management Act Enacted May 1970</div> <div style="border: 1px solid black; padding: 5px;">           (1) Waste generation control            (2) Appropriate waste treatment (including recycling)            (3) Regulation on waste management operators            (4) Establishment of waste management standards etc.         </div> </div> <div style="width: 45%;"> <p>&lt;Promotion of recycling&gt;</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Effective Resource Utilization Promotion Act Enacted May 1991</div> <div style="border: 1px solid black; padding: 5px;">           (1) Recycling of reusable resources            (2) Development of easy-to-recycle Structures and materials            (3) Labeling for sorted waste collection            (4) Promotion of the effective use of by-products etc.         </div> <div style="margin-top: 10px; font-size: x-small;">           Recycle → Reduce Reuse Recycle            (1R) (3R)         </div> </div> </div> <div style="text-align: center; margin-top: 10px;"> <b>Regulations in accordance with the properties of individual products</b> </div> <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th style="width: 15%;">Containers and Packaging Recycling Act</th> <th style="width: 15%;">Home Appliance Recycling Act</th> <th style="width: 15%;">Food Recycling Act</th> <th style="width: 15%;">Construction Recycling Act</th> <th style="width: 15%;">Automobile Recycling Act</th> <th style="width: 15%;">Small Home Appliance Recycling Act</th> </tr> </thead> <tbody> <tr> <td>Enacted June 1995</td> <td>Enacted May 1998</td> <td>Enacted May 2000</td> <td>Enacted May 2000</td> <td>Enacted July 2002</td> <td>Enacted July 2012</td> </tr> <tr> <td style="text-align: center;">(Bottles plastic bottles, paper and plastic containers and packaging etc.)</td> <td style="text-align: center;">(Air conditioners, refrigerators, freezers, TVs, and washing and drying machines)</td> <td style="text-align: center;">(Food waste)</td> <td style="text-align: center;">(Wood, concrete, and asphalt)</td> <td style="text-align: center;">(Automobiles)</td> <td style="text-align: center;">(Small electronic devices etc.)</td> </tr> </tbody> </table> <div style="margin-top: 10px; text-align: center;"> <div style="border: 1px solid black; padding: 5px; display: inline-block;">Green Purchasing Act (to promote the purchase of recycled products by the government) Enacted May 2000</div> </div> <p style="text-align: right; margin-top: 20px;"><i>Source: MOEJ</i></p>	Containers and Packaging Recycling Act	Home Appliance Recycling Act	Food Recycling Act	Construction Recycling Act	Automobile Recycling Act	Small Home Appliance Recycling Act	Enacted June 1995	Enacted May 1998	Enacted May 2000	Enacted May 2000	Enacted July 2002	Enacted July 2012	(Bottles plastic bottles, paper and plastic containers and packaging etc.)	(Air conditioners, refrigerators, freezers, TVs, and washing and drying machines)	(Food waste)	(Wood, concrete, and asphalt)	(Automobiles)	(Small electronic devices etc.)
Containers and Packaging Recycling Act	Home Appliance Recycling Act	Food Recycling Act	Construction Recycling Act	Automobile Recycling Act	Small Home Appliance Recycling Act														
Enacted June 1995	Enacted May 1998	Enacted May 2000	Enacted May 2000	Enacted July 2002	Enacted July 2012														
(Bottles plastic bottles, paper and plastic containers and packaging etc.)	(Air conditioners, refrigerators, freezers, TVs, and washing and drying machines)	(Food waste)	(Wood, concrete, and asphalt)	(Automobiles)	(Small electronic devices etc.)														

Country	Legislative Framework
<b>Malaysia</b>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>For hazardous waste management</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Environmental Quality Act 1974</div> <p>↓</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Environmental Quality (Prescribed Premises) (Scheduled Waste Treatment and Disposal Facilities) Regulations, 1989</div> <p>↓</p> <div style="border: 1px solid black; padding: 5px;">Environmental Quality (Scheduled Wastes) Regulations, 2005</div> </div> <div style="text-align: center;"> <p>For MSW management</p> <div style="display: flex; justify-content: space-between; width: 100%;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Solid Waste and Public Cleansing management Act (ACT 672), 2007</div> <div style="border: 1px dashed black; padding: 5px; margin-bottom: 5px;">Solid Waste Corporation Strategic Plan 2009-2013</div> </div> <p>↓</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Solid Waste Management and Public Cleansing Corporation (ACT 673), 2007</div> <p>↓</p> <div style="border: 1px dashed black; padding: 5px;">Tenth Malaysian Plan 2011-2015</div> </div> </div> <p style="text-align: center;"><i>Source: Prepared by Ghosh S.K., Author of Country Chapter</i></p>
<b>The Philippines</b>	<div style="text-align: center;"> <div style="display: flex; justify-content: space-around; margin-bottom: 10px;"> <div style="border: 1px solid black; padding: 5px;">National Solid Waste Management Strategy 2012-2016</div> <div style="border: 1px solid black; padding: 5px;">National Framework Plan for the Informal Sector in SWM (2009)</div> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px; width: 80%; margin: 0 auto;">RA 9003 (2001) Ecological Solid Waste Management Act of 2000</div> <div style="display: flex; justify-content: space-around; margin-bottom: 10px;"> <div style="border: 1px solid black; padding: 5px; width: 30%;">PD 825 (1975) Garbage Disposal Law</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">PD 1152 (1977) Philippine Environmental Code</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">RA 8749 (1999) Philippine Clean Air Act</div> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; width: 30%;">CA 383 (1938) Anti-dumping Law</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">PD 856 (1975) Code of Sanitation</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">PD 984 (1976) Pollution Control Law</div> </div> </div> <p style="text-align: center;"><i>Source: Prepared by Ghosh S.K., Author of Country Chapter</i></p>
<b>Singapore</b>	<div style="text-align: center;"> <p>Parent Act</p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;">Environmental Public Health Act (Chapter 95)</div> <p>↓</p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; padding: 5px; width: 45%;">Subsidiary Legislations Environmental Public Health (General Waste Collection) Regulations</div> <div style="border: 1px solid black; padding: 5px; width: 45%;">Environmental Public Health (Toxic Industrial Waste) Regulations</div> </div> </div> <p style="text-align: center;"><i>Source: Prepared by Ghosh S.K., Author of Country Chapter</i></p>

Country	Legislative Framework
<b>Thailand</b>	 <p style="text-align: center;"><i>Source: Prepared by Ghosh S.K., Author of Country Chapter</i></p>
<b>Viet Nam</b>	 <p style="text-align: center;"><i>Source: Prepared by Ghosh S.K., Author of Country Chapter</i></p>



*Source: prepared by IGES based on the data and information of Country Chapters, State of the 3Rs in Asia and the Pacific (United Nations Centre for Regional Development, 2017). ("Author" on the table refers to the author/s of each Country Chapter.)*